DOCUMENT RESUME

ED 047 632 HE 002 000

AUTHOR Kessel, Vicki; Mink, Oscar G.
TITLE The Systems Approach to Organization Development: Formulating Goals and Deriving Objectives.
PUB DATE Feb 71
NOTE 26p.; Paper presented at the Annual Convention of the American Educational Research Association, New York, New York, February 4-7, 1971

EDRS PRICE EDRS Price MF-$0.65 HC-$3.29
DESCRIPTORS Administration, Administrative Problems, *Higher Education, *Institutional Role, *Management Systems, Models, *Objectives, Planning, *Systems Approach
IDENTIFIERS *Administrative and Organizational Systems Model

ABSTRACT

Because of constantly changing forces, pressures and demands on institutions of higher education, college administrators have been compelled to seek new methods for enhancing educational develcpment. The systems approach, currently in vogue in industrial and governmental agencies, is also applicable to a full range of administrative structures found within the higher education world. This paper presents the Administrative and Organizational Systems (AOS) model designed by the Regional Education Laboratory for the Carolinas and Virginia (RELCV). The model is based on three basic hypotheses: (1) that the goals of the institution are clearly defined and that sufficient agreement exists among the constituent groups concerning goal priorities; (2) that the objectives of the institutions can be measured and are derived directly from the goals; and (3) that the attainment of goals or progress toward goals is assessed on the basis of these measurable objectives. The procedures for the successful execution of these procedures is discussed in terms of the AOS model. (AF)

ED047632

THE SYSTEMS APPROACH TO ORGANIZATION DEVELOPMENT: FORMULATING GOALS AND DERIVING OBJECTIVES[1]

by

Vicki Kessel, Ed.D.[2]

and

Oscar G. Mink, Ed.D

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION
THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL OFFICE OF EDUCATION POSITION OR POLICY.

[1]Paper presented at the Annual Convention of the American Educational Research Association, New York, Hilton Hotel, New York, New York, February 4-7, 1971.

[2]Copies may be obtained from the authors - RELCV, Mutual Plaza, Chapel Hill and Duke Streets, Durham, North Carolina, 27701

HE002000

THE SYSTEMS APPROACH TO ORGANIZATION DEVELOPMENT: FORMULATING GOALS AND DERIVING OBJECTIVES[1]

by

Vicki Kessel, Ed.D.[2]

and

Oscar G. Mink, Ed.D

[1]Paper presented at the Annual Convention of the American Educational Research Association, New York, Hilton Hotel, New York, New York, February 4-7, 1971.

[2]Copies may be obtained from the authors - RELCV, Mutual Plaza, Chapel Hill and Duke Streets, Durham, North Carolina, 27701.

THE SYSTEMS APPROACH TO ORGANIZATION DEVELOPMENT: FORMULATING GOALS AND DERIVING OBJECTIVES[1]

The omnipresent and overriding force of change in the modern world, the overwhelming problems faced by the university, and, in consequence, the barriers to successful management encountered by the college administrator have compelled those in higher education and educational administration to seek new methods for enhancing educational development. Many factors contribute to the failure of higher education to achieve its goals. Chief among these are the following: the lack of understanding of the university as an organization (Ikenberry, 1970b; Sanford, 1962; Axelrod, 1965; Wilson, 1965; Moran, 1968), the university's anachronistic organizational structure or forms of governance (Ikenberry, 1970b); and faulty or ineffective means of communication. The predicament in which higher education finds itself, explained in organizational terms, is one of inefficiency. The administrator, faced by so many problems, cannot perform efficiently and effectively; in turn, the teaching-learning process, the heart of the educational system, suffers.

Currently in vogue in industrial and governmental agencies, and proposed as a relief tactic for the university's afflictions, is the systems approach, equipped with its own theoretical framework and analytical procedures. Systems terminology has wide use (as well as misuse), and the approach, firmly established in management technology, has been found to be quite relevant to the tasks of the college administrator (Bell, 1966;

Etherington and Vancil, 1969).

Higher education is presently being urged to avail itself of better management techniques. The focus of the public eye, the seeker of resources from philanthropist and taxpayer (Millett, 1968), and the current object of criticism, concern, and curiosity, the American university has lately felt the traditional confidence and support of society ebbing (Ikenberry, 1969). This great institution, speculates Millett, ". . . can ill afford to do without systems analysis . . ."

The systems approach to organization development is applicable to the full range of administrative structures found in our nation's system of higher education - from those seen in a small department in a community college to those of a sprawling multiversity. The problems vary from one institution to another but ". . . the basic principles. . . are always the same" (Huff, 1969).

The term "management" has incurred some disfavor among educators and administrators. Opposition to "managerialization" of higher education is voiced openly, sometimes with sharp tongue, from behind the ivied walls (Brien, 1970; Knapp, 1969; Robinson, 1970). Many academicians are convinced that their organizations are so different from others that any transfer of concepts and methods would be impossible. Managerial techniques, it is argued, inhibit initiative and creativity (Robinson, 1970). An administrator who opposes the introduction of management procedures into an institution may not understand the significance of sound management (Heneman, 1959) or he may be

responding emotionally, reflecting fear or insult (Wilson, 1965; Bell, 1966; MacLean, 1969; Brien, 1970). Brien asserts that any stigma attached to the management process is unfounded, especially in light of recent developments; Knapp (1969) prescribes a meshing of management with education so that the institution will be capable of financial and academic survival.

There are, of course, disparities between educational institutions and other organizations: e.g., clarity of goals, tangibility of product or service, object of commitment, diffusion of decision-making privilege or responsibility (Corson, 1960), limitations placed on spending (Hungate, 1964), and source of energy renewal (Katz and Kahn, 1966). More similarities than differences exist, however, and with respect to certain of the divergencies from business organizations, a push in that direction might create a healthier situation, e.g., increased goal clarity (Corson, 1960).

Organization Development

Organization development (OD) is defined by Bennis (1969) as "a response to change, a complex educational strategy intended to change the beliefs, attitudes, values, and structure of organizations so that they can better adapt to new technologies, markets, and challenges, and the dizzying rate of change itself." Lippitt includes the strengthening of non-human as well as human resources in his notion of the concept and prefers to call the process "organization renewal" (Lippitt, 1969; 1970; This, 1970). Bennis, on the other hand, concentrates upon the "people variable."

"Change is the biggest story in the world today," writes Bennis (1969), and the organization's lack of means by which to cope with change created the need for organization development. OD is necessary whenever social institutions are competing " . . . for survival under conditions of chronic change" (Bennis, 1969). The process itself encompasses numerous strategies, e.g., team development, conflict resolution, goal-setting and planning, all of which in theory and (it is hoped) in practice lead to a healthy, self-renewing organization (Beckhard, 1969).

OD is not a new concept, only a new term (This, 1970). The first mention of the process of organization development was made about 13 years ago. The recent increase in its popularity, however, seems to parallel the development of effective OD strategies to produce planned organization change. Today it is widely accepted and respected as an effort to create a highly viable institution or organization (Bennis, 1969).

OD has a myriad of goals in terms of organizational functioning, e.g., cooperative group relations, consensus, open and trustful communication, high collaboration and low competition between units, flexibility, etc. (Beckhard, 1969). Morse, 1968). Gellerman (1970) states the goal of OD more simply as "to get all the parts of an organization moving in the same direction." Overall, organization development has been a boon to the planning function of the university, for it increases the institution's ability to solve problems and make decisions (This, 1970).

The Administrative and Organizational Systems (AOS) Model

In response to the current state of higher education and the administrator's dilemma, the Regional Education Laboratory for the Carolinas and Virginia (RELCV) has carefully examined systems analysis and its application to problem-solving in the university environment. The Laboratory (RELCV) has developed a model which, it is felt, provides life to the systems approach.

In brief, the AOS Model considers the institution's organizational structure as a total governance system consisting of two interacting, interdependent components. The first of these is the institutional planning subsystem, responsible for decision making. This component concentrates upon the change process. Other focal areas of institutional planning include achievement of a balance of individual and institutional needs, facilitation of open and accurate communications among constituent groups, and encouragement of a democratic style of decision making. The second component, the institutional functioning subsystem, executes the decisions generated by the first subsystem. In addition, the former transmits feedback regarding process and output to the latter. (See Figure 1.) Thus, planning and administrative activities compose one continuous process.

The operation of the RELCV organization development (OD) component is based upon a number of propositions. None of these, however, is an unfounded assumption, and it is the intent of the Laboratory to provide supplementary rationale whenever appropriate.

The three basic hypotheses of the model assume that an institution functions with maximum efficiency when the following conditions exist:

1. The goals of the institution are clearly defined and sufficient agreement exists among constituent groups (faculty, students, parents, administrators, alumni, citizens of the local community, and trustees) concerning goal priorities.
2. Objectives of the institution are measurable (can be assessed behaviorally) and are directly derived from the goals considered to be of highest priority by the institution's constituency.
3. Attainment of goals or progress toward goals is assessed on the basis of these measurable objectives, i.e., the institution is managed by those objectives, authority being delegated to those constituents closest to the activity which will achieve a particular objective.

RELCV feels that the successful execution of these fundamental procedures is essential to effective management in an institutional setting.

There is currently much ferment regarding goals for higher education (Anderson, 1969). With the help of management specialists, administrators are recognizing the factors which have limited their ability to establish goals, e.g., the com-

plexity of the task to be performed and the inability to predict the specific nature of the task. Multiple lines of power and the resulting diffusion of decision making authority aggravate goal-setting difficulty. An additional restriction upon educational organizations is the traditional focus of the professional staff upon professional rather than organizational values. The faculty member's allegiance is toward his respective profession rather than to the institution. These obstacles to effective organization and administration are seldom encountered in the production-oriented organization (Etzioni, 1964; Ikenberry, 1970a; Ikenberry, 1970b).

Higher education is not content, however, with the status quo; it is not willing to accept ineffective and inefficient management as a necessary condition of university culture. To overcome the impediments to goal-setting and other constraints placed upon them, many administrators are looking to new methods, e.g., the systems approach, for an answer. Ironically, systems study cannot be accomplished without an explicit statement of goals (Cook, 1968; Ryans, 1964) and a goals inventory has been suggested as a practical method for obtaining this statement (Doi, et al., 1963). Thus, RELCV contends that the goals of an institution should be established systematically and that the best criteria for the effectiveness of the systems approach is the accomplishment of institutional goals.

Delineation of goals is probably the most widely accepted and least questioned principle of any work unit which must plan (Ohm, 1966; Newman, 1950; Gross, 1965). A clear

statement of the goals of an institution form a basis for organizational functioning; it serves as a set of guidelines in setting priorities, generating strategies, and evaluating products and services. Harlow (1965), in fact, suggests that " . . . the definition of purpose may (in itself) be the most important output of the system."

An understanding of purpose and ideology by everyone concerned is essential to a sound organization. It is the belief of many that widely shared goals could fill the void left by the de-emphasis of institutional "loyalty" and could become the unifying force of the university (Berkeley report, 1968; Otten, 1968; Bell, 1966). This necessary condition of mutual understanding is not being satisfied on the modern campus, and no evidence exists to suggest that agreement on goals is close at hand (Ikenberry, 1969, 1970b). Students themselves question the goals of higher education (Stumpf, 1970).

Educational and institutional goals are often too global, vague, misleading, implicit, inconsistent, or idealistic to make possible the conversion of decisions into action (Newman, 1950; Umbeck, 1970; Katz and Kahn, 1966; Judy, 1970). Broad institutional goals must be broken down into sequences of subgoals or objectives and described in sufficient detail so that they can be quantified (Robinson, 1970; Newman, 1950; Smith, 1969; Elkins, 1970; Millett, 1968; Dyer, 1969). In line with this thinking, the AOS Model calls for the derivation of specific objectives from the more general goal statements. These objectives, as dictated by the Model, should be "dynamically quanti-

fied," i.e., operationally defined in behavioral terms, provided with appropriate performance indicators so that they are "measurable," and subject to revision and change. Program outcomes may then be measured and evaluated against a criterion which accompanies the particular objective under test. Hence, the objectives become results by which the overall functioning of the institution can be determined (quantitative and qualitative evaluation). Appraisal of these dimensions provides an index of profitability in its broadest societal sense.

Additional considerations involved in describing goals and objectives are the following:

1. Everyone concerned must be made aware of these institutional and program objectives and of the relationship between his own personal and professional needs and existing expectations about his performance. He should know the performance standards by which he, as well as the institution, is to be evaluated (Elkins, 1970).
2. Objectives of organizations (and higher education is no exception) are dynamic. They change as the American situation changes (Sanford, 1962). Consequently, the goals, objectives, and related assumptions of a single institution should be reformulated periodically. Goal-setting, objective specification, and assumption development are therefore seen as an

ongoing, unremitting process.

Whenever possible, institutional assumptions, goals, and objectives are dynamically quantified in order to assess the degree of objective attainment. Institutional planning is carried out with the full knowledge that the future cannot be predicted with accuracy. Resulting plans, therefore, are only approximations of the future.

One method employed as an intervention strategy in the AOS Model is an instrument by which institutional goals are described; it attempts to meet the need for goal consensus. This instrument, the Institutional Goals Inventory (IGI), by using the Delphi technique and accompanying training materials, can assist an institution in formulating appropriate goals for itself and in integrating effectively the needs of its constituency with its goals (Uhl, 1971). The Institutional Goals Inventory and Delphi technique were developed and pilot tested by the Educational Testing Service with the support of RELCV.

When constituencies are found to hold widely divergent views, institutional researchers may apply special techniques to move them toward consensus. One such technique is the Delphi method developed by the RAND Corporation. It consists of administering the same survey to the same sample groups repeatedly, each time revealing how the various groups responded previously. This technique has resulted in a modification of views among divergent groups, leading progressively toward convergence of opinion.

The RELCV training package accompanying the IGI contains self-instructional materials for establishing, clarifying, and obtaining constituent support for goals. The Institutional Objectives Data Bank will accumulate an array of goals, objectives, and activities. Institutions participating in the AOS Program will then be provided with prototype data from other institutions in the form of (1) alternative goals and objectives, and (2) alternative strategies for accomplishing goals and for training personnel in developing and accomplishing measurable objectives.

After the alternative strategies have been selected by the institution by direct application of systems techniques, by retrieval from the Data Bank, or by a combination of both methods, the organization must begin implementation. This has become a problem to managers of large organizations, including universities, because of the multitude and diversity of activities performed in those organizations. The top academic administrators witness few of the processes taking place inside the university and rarely speak personally to those whose responsibility it is to effect these tasks. Even though it is impossible for one individual to direct all the activities of a large organization, he can, however, control the results. Thus the administrator makes every employee aware of institutional goals and objectives (as well as policies and preferred or required procedures for attainment of objectives), and he evaluates certain work units (departments, divisions, components, branches, schools, etc.) by those criteria (Odiorne, 1970; Drucker, 1954, 1964;

Likert, 1961; McGregor, 1960).

These principles are embodied in a system known as Management by Objectives (MBO). It is described by Odiorne (1965) as defining outputs in terms of objectives and applying these output statements as standards by which to judge the quality of activity as well as to govern the release and effectiveness of the inputs (students, resources, etc.). RELCV intends to develop and to introduce into institutions of higher learning systematic approaches to participative management and management-by-objectives. A few of the benefits that are likely to result from these programs are as follows:

1. Reduction of the tendency to begin work toward momentarily clear goals but to lose sight of these longer-term goals as one becomes deeply enmeshed with "here-and-now" activity.
2. Increased awareness of goals and related objectives, a condition which has been found to be associated with successful organizations.
3. Improvement of individual and over-all organizational functioning (Odiorne, 1965).

It follows, therefore, that installation of the management-by-objectives approach should augment the institution's capacity to realize as fully as possible the potential of its human resources.

A last assumption upon which the AOS Model is founded is as follows: organizational change is most likely to be effected if the systems approach is supported by those in high

level administrative or leadership positions (Gellerman, 1970; Brien, 1970; Holmes, 1970). The need for a new change agent in education has been expressed (Cross, 1967); this element - a type of catalyst - is a requisite of the Model.

A likely candidate for the role of change agent is the president of the institution. Most presidents are, as they should be, interested in participating in change-producing activities, e.g., definitions of goals, clarification of objectives, and evaluation by objectives (Foote, Mayer, et al., 1968; Hodgkinson, 1970), but their busy schedules prevent them from doing so. The Model, therefore, is designed with this fact in mind and attempts to make presidential participation less time-consuming and more productive.

The Model introduces a special staff position, that of the Educational Development Officer (EDO). According to this scheme, the EDO, an educator-administrator, acts as an internal change agent for the institution. It is recommended that he possess research skills and a working knowledge of the problems encountered by higher education, as well as skills in human relations and interaction, so that he might work efficiently with the institution's constituency. Optimally, the EDO interacts normally with as many sectors of the constituency and as many representatives of top-level authority as is feasible.

Bennis (1969) espouses the view that, at least during the beginning phases of planned organizational change, an external change agent is necessary, i.e., an outsider tends to "carry more weight" or can influence the power structure in cases where an

internal agent would be impotent. The Laboratory hopes to assume this role of external change agent in instit ıting these programs and developing the function of the Educational Development Officer as a change agent within the institution. Training materials and techniques, therefore, whereby an institution can on its own establish the role of the EDO are provided the colleges by RELCV.

The business of developing an ideology, of outlining the purposes, and of influencing the functioning of an institution is the concern of "all members of the academic enterprise." It cannot and should not be performed solely by the administration (Ikenberry, 1970b). Additionally, all those whose decisions in some way affect the character or operations of the institution should be concerned with the same questions (Brien, 1970). A logical outgrowth of these desirable conditions and an element of a systems design developed and successfully employed at St. Louis University, for example, is a university-wide group in which comprehensive plans are formulated. This committee should not include persons who are remote from the academic community and should be representative of all cons+ituent groups affected by the workings or the reputation of the institution (Parden, 1969).

A similar group recommended by Brien (1970) requires certain conditions in order to be productive. The task group's initial perceptions should be as neutral as possible; an accurate, comprehensive information base must be available; and the group must have support from top administration.

In accordance with these convictions, the AOS Model suggests that an institution-wide planning group, called the Advisory Planning Group (APG) be established as the primary energizing force in decision-making. It receives staff support from the Educational Development Officer (EDO) and in larger institutions, from a team of specialists called the Educational Development Team (EDT), headed by the EDO. The Educational Development Officer may be the chairman of the APG, a member, or a nonmember, subject to the decision of the institution. It is advised that the president of the institution be a voting member but not the chairman. Other members of this planning body might include administrators, faculty, students, alumni, board members, and citizens of the community. According to the Model, this group acts as an internal change agent with direct and ready access to the president.

In essence, the overall strategy of the AOS Model is to effect planned organizational change that will improve the institution's functioning. These changes are reflected in a variety of process and outcome measures encompassed in the organization development (OD), information systems (IS), and institutional research (IR) components of the AOS Model. It accomplishes reform by acting as an influential, if not driving, force upon the internal processes of the university. (See Figure 2A and Figure 2B). In other words, the model is designed to operate in such a manner that college management, or governance if you will, including the APG, is a unique part of the total system - an overseer and a communications link. By attempting

to use the inputs supplied to the institution in the most efficient and effective fashion, and by shaping the course of university process as well as being a very vital process itself, it assures that the products - institutional outputs - will be of high quality and will aid the institution in achieving its objectives.

Conclusion

In 1962, Sanford brought to the nation's attention the failure of colleges to achieve their own stated goals, to say nothing of overall educational goals. It is, of course, easier to criticize than to change, and many of higher education's most vehement critics are offering no solutions. Still, the American academy can no longer resist change. Outmoded forms of sovereignty and antiquated rules can only lead to chaos (Sanford, 1962; Ikenberry, 1970a; Wilson, 1965). The current state of higher education indicates that innovation and experimentation are necessary, not only for the well-being of our institutions, but for their very survival.

There are countless barriers to be encountered on the road to reform of higher education, as anyone familiar with this old establishment realizes (Sanford, 1962). Monroe (1969) states that "the two social institutions most like schools are monasteries and penal institutions," and, through the ages, they too have been unyielding to societal forces and insistent upon traditional methods of operation.

Change, however, within institutions of higher learning should not be haphazard. It should be based upon sound

theory and research and should result from educational expermentation to determine the effects of new programs, policies, or strategies. Proposals of this type have usually met with resistance. Those in opposition argue that, according to the Hawthorne experiments in which workers increased productivity under any altered conditions, no conclusion can be drawn about the success of an experiment. Sanford's (1962) rebuttal, in essence, asserts that the success of experimental programs in general is enough evidence in itself to warrant the initiation of additional experimental programs. In the same vein, these creative efforts are said to be characteristic of institutions which "care" (Anderson, 1969). RELCV feels that it can offer to caring institutions a powerful instrument of change embodied in the AOS Model.

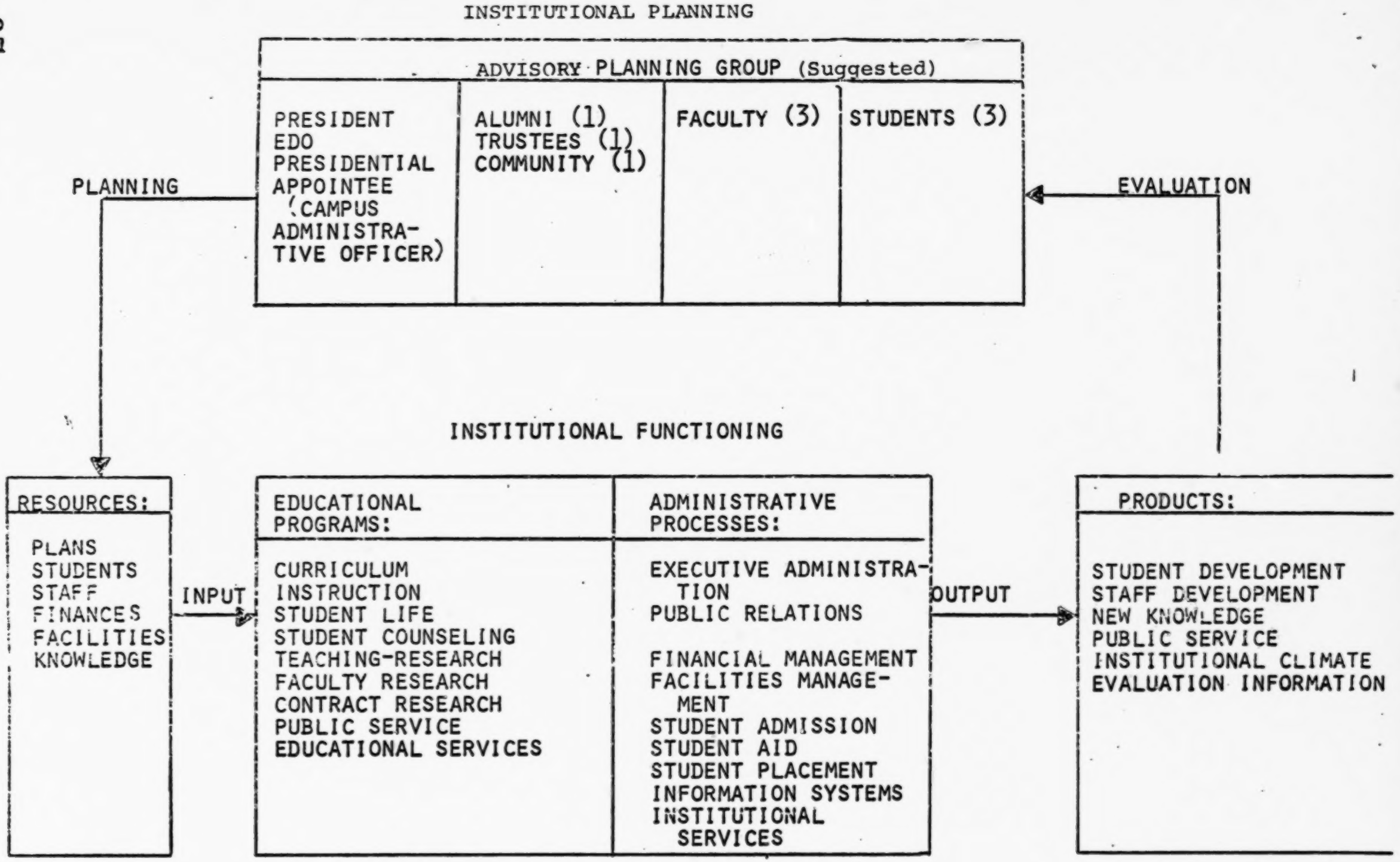


Figure 1. AOS MODEL

FIGURE 2A

The Governance System: Operations

Action ——→
Inputs and Feedback - - -→

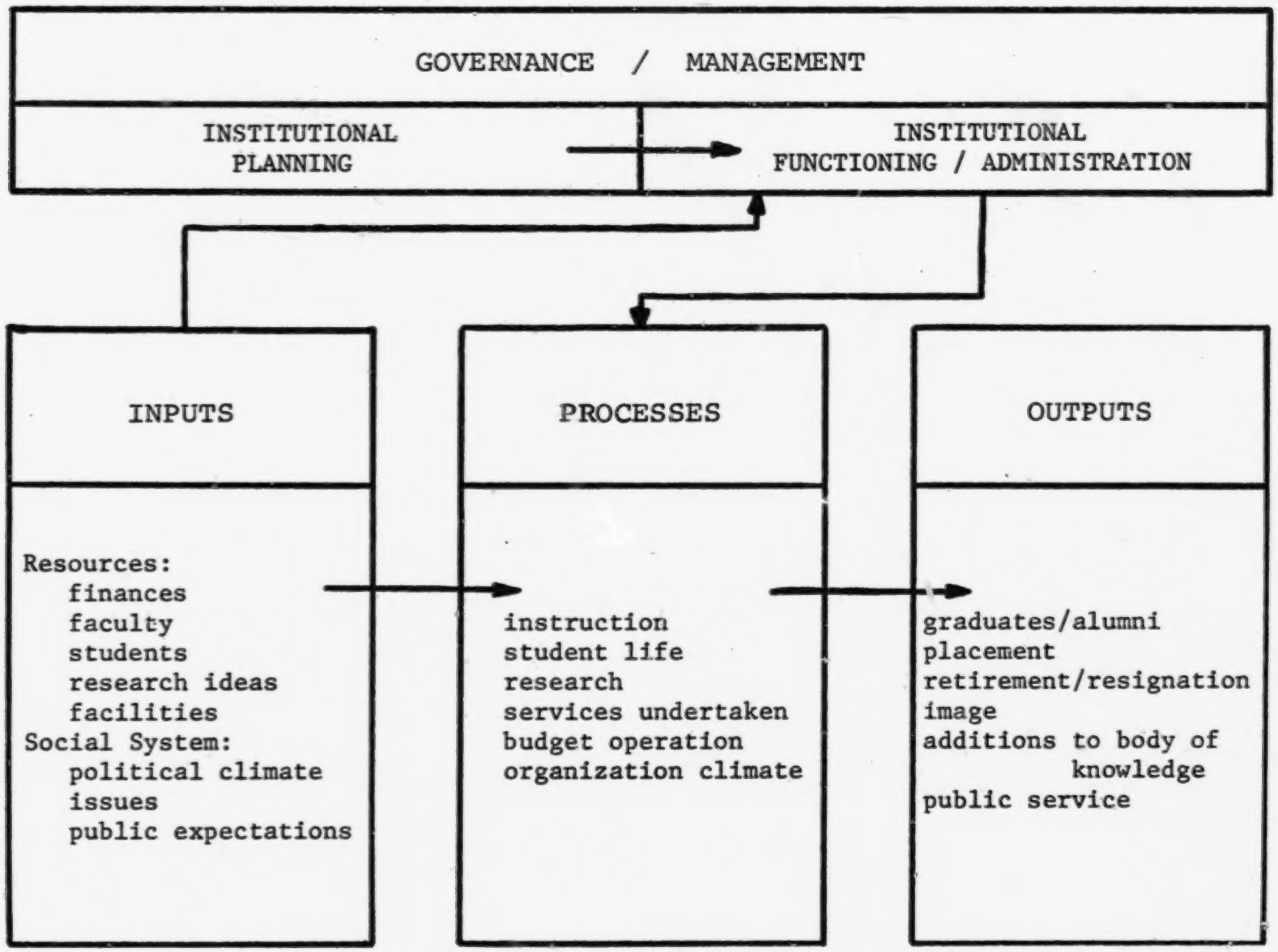
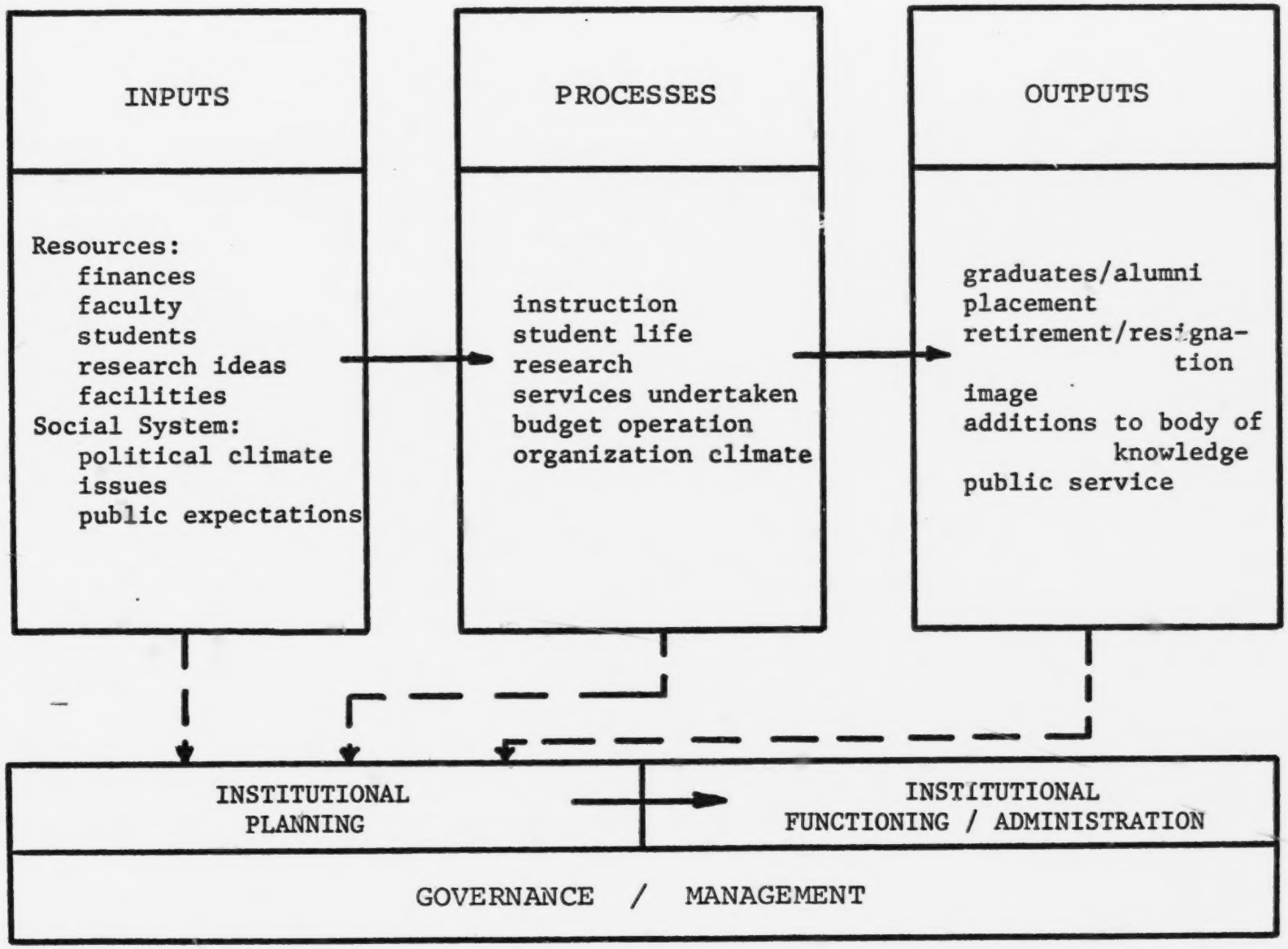


FIGURE 2B

The Governance System: Planning Regulators

Action ⟶
Inputs and Feedback - - - ➔



Anderson, G. The changing college curriculum - issues and implications. Papers presented at conference for the Council for the Advancement of Small Colleges, Aug. 1969.

Axelrod, J. New patterns of internal organization. In L. Wilson (Ed.), Emerging patterns in American higher education. Washington, D. C.: American Council on Education, 1965, 40-61.

Beckhard, R. Organization development: Strategies and models. Reading, Mass.: Addison-Wesley, 1969.

Bell, D. The reforming of general education. New York: Columbia University Press, 1966.

Bennis, W. Organization development: Its nature, origins, and prospects. Reading, Mass.: Addison-Wesley, 1969.

Berkeley report. The culture of the university: Governance and education (Report of the Study Commission on University Governance, University of California, Berkeley, California), Jan. 15, 1968.

Brien, R. The "managerialization" of higher education. Educational Record, 51 (3), 1970, 273-280.

Cook, D. The impact of systems analysis on education. Paper presented at Seminar on Systems Analysis, Temple University, Philadelphia, Pennsylvania, April 18, 1968.

Corson, J. Governance of colleges and universities. New York: McGraw-Hill, 1960.

Cross, K.P. When will research improve education? The Research Reporter (Center for Research & Development in Higher Education, University of California, Berkeley), 1967, 2(4), 1-7.

Doi, J. et al. Panel discussion on means and ends of institutional research. In E. Hallenbeck and L. Redfern (Eds.), A college colloquim on institutional research. Kingston, Rhode Island: University of Rhode Island, 1963, 13-18.

Drucker, P. The concept of the corporation. New York: New American Library, 1964.

Drucker, P. The practice of management. New York: Harper & Row, 1954.

Dyer, H. An educational researcher's view of systems analysis. Paper presented at AERA Symposium on Systems Analysis and Educational Research, Los Angeles, California, February 7, 1969.

Elkins, F. An approach to the systems approach. Improving College and University Teaching, 1970, 18 (2), 102-103.

Etherington, E. and Vancil, R. Systems and simulations: New technology goes to work on decision-making. College and University Business, 1969, 46 (3), -5-62.

Etzioni, A. Modern organizations. New York: Wiley, 1964.

Foote, C., Mayer, H. and associates. The culture of the university. San Francisco: Jossey-Bass, 1968.

Gellerman, W. Systems OD. Paper presented at Fall Meeting of OD Network, Minneapolis, Minn., Oct. 5-9, 1970.

Gross, B. What are your organization's objectives? Human Relations, 1965, 18, 195-215.

Harlow, J. G. Implications for the preparation of school administrators. In R. Ohm and W. Monahan (Eds.), Philosophy in action. Norman, Okla.: University of Oklahoma, 1965.

Keneman, H. Opportunities for improved management in higher education. In D. Keezer (Ed.), Financing higher education, 1960-70. New York: McGraw-Hill, 1959.

Hodgkinson, H. Presidents and campus governance: A research profile. Educational Record, 1970, 51 (2), 159-166.

Holmes, W. Preparing. Administrative Management, 1970, 31 (10), 80-81.

Huff, R. A systems approach to decision-making in higher education. Institute on Departmental and Institutional Development, Monte Corona Conference Center, Lake Arrowhead, California, August 25-29, 1969.

Jungate, T. Management in higher education. New York: Bureau of Pub., Columbia University, 1964.

Kenberry, S. General education and the universities. Unpublished manuscript, Center for the Study of Higher Education, Pennsylvania State University, 1970. (a)

Kenberry, S. Instructional systems in higher education - Specifications for individualization. Paper presented at the fall meeting of the Pennsylvania Educational Research Association, University Park, Pa., Oct. 4, 1969.

Kenberry, S. Roles and structures for participation in higher education governance: A rationale. Unpublished manuscript, Center for the Study of Higher Education, The Pennsylvania State University, University Park, Pa., 1970. (b)

Katz, D. and Kahn, R. The social psychology of organizations. New York: John Wiley, 1966.

Knapp, D. Management intruder in the academic dust. Educational Record, 1969, 50 (1), 55-59.

Judy, R. Systems analysis for efficient resource allocation in higher education: A report on the development and implementation of campus techniques. Paper presented at AAHE National Conference on Higher Education, Chicago, March 3, 1970.

Likert, R. New patters of management. New York: McGraw-Hill, 1961.

Lippitt, G. Organizational renewal. New York: Appleton-Century Crofts, 1969.

Lippitt, G. Public lecture, Regional Education Laboratory for the Carolinas and Virginia, Durham, North Carolina, Oct. 1970.

MacLean, D. Preliminary summary of five-year planning data: 1969-70 through 1973-74. Houston: University of Houston, 1969.

McGregor, D. Human side of enterprise. New York: McGraw-Hill, 1960.

Millett, J. Decision-making and administration in higher education. Kent, Ohio: Kent State University Press, 1968.

Monroe, B. Modifying existing management systems for use in educational agencies. Paper presented at the Systems 70 Conference by Space Division/North American Rockwell, Seal Beach, California, November 13, 1969.

Morse, L. Task-centered organization development. Unpublished master's thesis, Massachusetts Institute of Technology, 1968.

Newman, W. Administrative action. New York: Prentice-Hall, 1950.

Odiorne, G. Management by objectives - The current state of the art. Speech made at the Annual Convention of the American Psychological Association, Miami Beach, Florida, August 1970.

Odiorne, G. Management by objectives - A system of managerial leadership. New York: Pitman, 1965.

Ohm, R. Organization goals -- A systems approach. Paper presented at National Conference of Professors of Educational Administration, Indiana University, August 25, 1966.

Otten, C. Ruling out paternalism: Students and administrators at Berkeley. American Behavioral Scientist, 1968, 51 (5), 28-33.

Parden, R. Implementing systems analysis in higher education. Commentary presented at WICHE Department Chairman Planning Conference, Lake Arrowhead, California, August 1969.

Robinson, D. Some observations on the new management - for college and university. Management Controls, Oct. 1970, 216-220.

Ryans, D. System analysis in planning. Paper presented at the 6th Annual Institute on College Self-Study, Berkeley, California, July 9, 1964.

Sanford, N. (Ed.). The American College. New York: John Wiley, 1962.

Smith, R. Management methods. College Management, 1969, 4 (3), 58-63.

Stumpf, S. Freedom and order on the campus. School and Society, 1970, 98, 401-403.

This, L. Organizational development: Fantasy or reality. Washington, D. C.: Project Associates, 1970.

Uhl, N. An approach to encourage convergence of opinion concerning an institution's goals, Feb. 1971.

Umbeck, S. Impediments to good management. College and University Journal, 1970, 9 (4), 16-18.

Wilson, L. Form and function in American higher education. In L. Wilson (Ed.), Emerging patterns in American higher education. Washington, D. C.: American Council on Education, 1965, 29-37.